

**SOLID WASTE PERMITTING  
SUBMISSION INSTRUCTION NO. 1**

**PROCEDURAL REQUIREMENTS FOR A NEW OR MODIFIED  
SOLID WASTE MANAGEMENT FACILITY (SWMF) PERMIT APPLICATION**

---

Developed by:

**Virginia Department of Environmental Quality  
Office of Waste Permitting and Compliance  
629 East Main Street  
Richmond, Virginia 23219**

**Rev. 01/2012**

## TABLE OF CONTENTS

<b>I.</b>	<b>APPLICABILITY.....</b>	<b>5</b>
A.	SOLID WASTE DISPOSAL FACILITIES .....	5
B.	SOLID WASTE MANAGEMENT FACILITIES.....	5
<b>II.</b>	<b>PRE-APPLICATION STEPS.....</b>	<b>6</b>
A.	PRE-APPLICATION MEETING .....	6
B.	PUBLIC PARTICIPATION STEPS.....	6
C.	RESERVATION OF DISPOSAL CAPACITY.....	6
<b>III.</b>	<b>NOTICE OF INTENT.....</b>	<b>7</b>
A.	COVER LETTER .....	7
B.	DISCLOSURE STATEMENT .....	7
C.	LOCAL GOVERNMENT CERTIFICATION .....	7
D.	PUBLIC PARTICIPATION DOCUMENTATION .....	8
E.	DISPOSAL CAPACITY GUARANTEE .....	8
F.	HOST AGREEMENT OR DISCUSSION OF DISPOSAL LIMITS/SERVICE AREA.....	8
G.	DEMONSTRATION OF NEED.....	9
H.	SCC CERTIFICATION .....	10
<b>IV.</b>	<b>PART A PERMIT APPLICATION.....</b>	<b>11</b>
A.	APPLICATION FORM.....	11
B.	PERMIT APPLICATION FEE .....	11
C.	PTA ATTACHMENTS I THROUGH VIII .....	11
D.	PTA ATTACHMENT IX: KEY MAP, NEAR-VICINITY MAP, AND REGIONAL MAP.....	11
E.	PTA ATTACHMENT X: PROOF OF OWNERSHIP DOCUMENTS.....	13
F.	PTA ATTACHMENT XI: HYDROGEOLOGIC AND GEOTECHNICAL REPORT .....	13
G.	PTA ATTACHMENT XII: LOCATION OF BORINGS AND BORING LOGS.....	17
H.	PTA ATTACHMENT XIII: LABORATORY AND FIELD DATA .....	18
I.	PTA ATTACHMENT XIV: MATERIALS VOLUME CALCULATIONS.....	18
J.	PTA ATTACHMENT XV: GEOLOGIC MAPS, ORTHOGONAL CROSS-SECTIONS, AND POTENTIOMETRIC SURFACE MAPS.....	18
K.	PTA ATTACHMENT XVI: VDOT ADEQUACY REPORT AND APPROVAL LETTER .....	19
L.	PTA ATTACHMENT XVII: LANDFILL IMPACT STATEMENT.....	19
M.	PTA ATTACHMENT XVIII: CERTIFICATION AND DOCUMENTATION OF ADJACENT PROPERTY OWNER NOTIFICATION .....	25
N.	PTA ATTACHMENT XIX: DISCUSSION OF PUBLIC INTEREST SERVED.....	25
O.	PTA ATTACHMENT XX: AIRPORT PROXIMITY AND AGENCY COORDINATION.....	25
P.	PTA ATTACHMENT XXI: FEMA FLOOD INSURANCE RATE MAP .....	27
Q.	PTA ATTACHMENT XXII: WETLANDS DEMONSTRATION AND AGENCY COORDINATION .....	27
R.	PTA ATTACHMENT XXIII: DEMONSTRATION REGARDING PROXIMITY TO FAULT OR SITING WITHIN A SEISMIC IMPACT ZONE .....	30
S.	PTA ATTACHMENT XXIV: REQUEST FOR EXEMPTION OF SITE FROM THE REQUIREMENTS OF §9 VAC 20-81-120.D. AND/OR 120.F. ....	30
<b>V.</b>	<b>PART B PERMIT APPLICATION.....</b>	<b>31</b>
A.	APPLICATION FORM.....	31

B. PERMIT APPLICATION FEE .....	31
C. PTB ATTACHMENT I: NOTICE OF INTENT .....	31
D. PTB ATTACHMENT II: VDOT ADEQUACY REPORT AND APPROVAL LETTER.....	31
E. PTB ATTACHMENT III: DESIGN PLANS .....	32
F. PTB ATTACHMENT IV: CLOSURE PLAN .....	32
G. PTB ATTACHMENT V: POST-CLOSURE CARE PLAN.....	32
H. PTB ATTACHMENT VI: DESIGN REPORT .....	32
I. PTB ATTACHMENT VII: CONSTRUCTION QUALITY ASSURANCE (CQA) PLAN & TECHNICAL SPECIFICATIONS .....	32
J. PTB ATTACHMENT VIII: LEACHATE MANAGEMENT PLAN .....	32
K. PTB ATTACHMENT IX: LANDFILL GAS MANAGEMENT PLAN AND LANDFILL GAS REMEDIATION PLAN .....	33
L. PTB ATTACHMENT X: GROUNDWATER MONITORING PLAN .....	33
M. PTB ATTACHMENT XI: GROUNDWATER CORRECTIVE ACTION PLAN.....	33
N. PTB ATTACHMENT XII: FINANCIAL ASSURANCE DEMONSTRATION .....	33
O. PTB ATTACHMENT XIII: SPECIAL WASTE DOCUMENTATION.....	33
P. PTB ATTACHMENT XIV: ALTERNATE LINER DEMONSTRATION .....	34
Q. PTB ATTACHMENT XV: LABORATORY TEST RESULTS DOCUMENTING PERMEABILITY OF IN-PLACE SOILS .....	34
R. PTB ATTACHMENT XVI: ALTERNATE FINAL COVER DEMONSTRATION .....	34
S. PTB ATTACHMENT XVII: RESEARCH, DEVELOPMENT, AND DEMONSTRATION PLAN .....	35
<b>VI. PERMIT MODIFICATIONS.....</b>	<b>36</b>
A. MAJOR MODIFICATIONS.....	36
B. MINOR MODIFICATIONS.....	37
C. PERMITTEE CHANGE .....	39
D. TEMPORARY AUTHORIZATION .....	39
E. RESEARCH, DEVELOPMENT, AND DEMONSTRATION PLANS.....	40
<b>VII. APPENDICES.....</b>	<b>41</b>
A. PRE-APPLICATION CORRESPONDENCE.....	41
B. NOTICE OF INTENT CORRESPONDENCE .....	41
C. PART A PERMIT APPLICATION CORRESPONDENCE .....	41

---

## **LIST OF FIGURES**

<b>FIGURE 1</b>	FLOWCHART FOR SITING A SANITARY LANDFILL WITH RESPECT TO PROXIMITY TO EXISTING SURFACE OR GROUNDWATER PUBLIC WATER SUPPLY INTAKE OR RESERVOIR IN ACCORDANCE WITH CODE OF VIRGINIA §10.1-1408.4 B.3. ....	22
<b>FIGURE 2</b>	FLOWCHART FOR SITING A SANITARY LANDFILL WITH WETLANDS IMPACTS IN ACCORDANCE WITH §10.1-1408.5 OF THE CODE OF VIRGINIA .....	28
<b>FIGURE 3</b>	WETLANDS PERMITS AND SOLID WASTE PART A APPLICATIONS CLARIFICATION OF GUIDANCE MEMO 06-2005.....	29

---

## I. APPLICABILITY

---

The Virginia Waste Management Act ([Title 10.1, Chapter 14 of the Code of Virginia \(10.1-1400 et seq.\)](#)) stipulates that all facilities for the disposal, treatment, or storage of nonhazardous solid waste obtain a permit from the Director of the Department of Environmental Quality. Permit application procedures and documentation are dictated in the Waste Management Act and Solid Waste Management Regulations ([Title 9 of the Virginia Administrative Code \(VAC\), Agency 20, Chapter 81 \(9 VAC 20-81 et seq.\)](#)). This Submission Instruction provides a guide to what should be submitted when applying for a solid waste permit and how the permit application will be processed.

### A. Solid Waste Disposal Facilities

Applicants for a permit to operate a solid waste disposal facility, (i.e. a sanitary, CDD, or industrial landfill), are required to obtain a full solid waste permit as discussed in this Submission Instruction. Applications for a full solid waste permit shall contain a Notice of Intent, a Part A Permit Application and a Part B Permit Application as discussed in [Sections III., IV., and V.](#) below. [§9 VAC 20-81-450, 460, and 470]

### B. Solid Waste Management Facilities

Applicants for a permit to operate a solid waste management facility (i.e. compost facility; solid waste transfer station; materials recovery facility; waste to energy, thermal treatment, or incineration facility; waste pile; or centralized waste treatment facility) will usually apply for a Permit-by-Rule as discussed in *Submission Instruction No. 10: Procedural Requirements for Permits-by-Rule*; however, this Submission Instruction provides details of the application to be submitted should the Department require the applicant to apply for a full solid waste permit. [§9 VAC 20-81-410.A.4., 450, 460, and 480]

## II. PRE-APPLICATION STEPS

---

### A. Pre-Application Meeting

A pre-application meeting is not mandatory, but can be used to identify potential regulatory requirements that may be applicable to the project, any changes to the project because of statute changes that are not reflected in the regulations, or any other matter. This meeting is also an opportunity to discuss any applicable guidance that has been published or is in draft form; to identify out of the ordinary or innovative design features or unique circumstances that require special consideration; to determine the need to obtain variances, exemptions, approval of alternates, or functionally equivalent design issues, in addition to discussing the required permit fee, timelines for permit processing and input with respect to potential challenges, pitfalls or constraints that may be associated with the project. If the applicant wishes to set up a pre-application meeting, please contact the DEQ Regional Office responsible for the proposed location of the facility.

### B. Public Participation Steps

*{Applicable only to new sanitary landfills or transfer stations}* The public comment steps must be completed prior to filing the notice of intent with the Department. Public notice and public hearings/meetings must be completed in accordance with the applicable provisions of Code of Virginia [§15.2-2204](#), [§15.2-2285](#) and [§10.1-1408.1](#). An example public notice is provided in [Appendix A.1](#). [§9 VAC 20-81-450.B.4.]

*{If the application is for a sanitary landfill or transfer station owned/operated by the local government or public authority}* In addition to the above steps, the public comments steps shall include the formation of a citizen's advisory group in accordance with Code of Virginia [§10.1-1408.1 B.5](#). No public participation is necessary for local governments or public authorities proposing to locate a new transfer station on land where a sanitary landfill is already located.

### C. Reservation of Disposal Capacity

*{Applicable only to privately owned sanitary landfills}* Applicants should contact all localities of the Commonwealth to give notice that a landfill is planned and give the localities an opportunity to reserve airspace capacity in accordance with the needs outlined in each respective Solid Waste Management Plan ([§10.1-1411](#)). Example notification letters and reservation capacity statements are provided in [Appendix A.2](#). [Code of Virginia §10.1-1408.1 B.6.; §9 VAC 20-81-450.B.5.]

### III. NOTICE OF INTENT

---

The notice of intent (NOI) initiates the permit application process and consists of the items discussed below. The NOI may be submitted by itself or may accompany the Part A Permit Application as discussed in [Section IV.C.](#)

#### A. Cover Letter

Submit a letter to the DEQ Regional Office Land Protection & Revitalization Program Manager describing the desired permit, the precise location of the proposed facility, and the intended use of the facility. The applicant shall provide area and site locations maps as attachments to this letter. The site location map should identify both the property and facility boundaries and should be drawn to scale. Use of USGS/topographic maps, local property maps, and internet mapping programs is recommended. [§9 VAC 20-81-450.B.1.]

#### B. Disclosure Statement

*{Applicable to new solid waste management facilities or modifications for a noncaptive industrial landfill requesting an expansion or increase in capacity}* Provide a signed and notarized DEQ Form DISC-01 and DEQ Form DISC-02 for each key personnel identified on DISC-01. [Code of Virginia §10.1-1408.1 B.2. and C.; §9 VAC 20-81-450.B.2.]

These forms are available on the DEQ Website:

DEQ Form DISC-01: <http://www.deq.virginia.gov/waste/pdf/wstregs/formdisc01.pdf>

DEQ Form DISC-02: <http://www.deq.virginia.gov/waste/pdf/wstregs/formdisc02.pdf>

The Disclosure Statement should identify those key personnel who have obtained a Waste Management Facility Operators License as required by the Code of Virginia [§10.1-1408.2 B.](#), which states all solid waste management facilities shall be operated under the direct supervision of a waste management facility operator licensed by the Board for Waste Management Facility Operators. Information on training and licensing can be found on the Board's website: [http://www.dpor.virginia.gov/dporweb/was\\_main.cfm](http://www.dpor.virginia.gov/dporweb/was_main.cfm).

#### C. Local Government Certification

*{Applicable to new solid waste management facilities or modifications requesting an expansion or increase in capacity}* Provide a signed DEQ Form SW-11-1. The form has three signature blocks: one for the applicant, one for a local government representative certifying consistency with the local Solid Waste Management Plan and one for a local government representative certifying consistency with all local ordinances. The last two blocks may be completed and signed by the same local government representative if applicable. [Code of Virginia §10.1-1408.1 B.9.; §9 VAC 20-81-450.B.3.]

This form is available on the DEQ Website:

<http://www.deq.virginia.gov/export/sites/default/waste/pdf/forms/localcert.pdf>

If the proposed location is not governed by any county, city, or town zoning ordinance, the application shall provide a certification from the local governing body that it held a public hearing in accordance with [§15.2-2204](#). [Code of Virginia §10.1-1408.1 B.3.]

#### D. Public Participation Documentation

*{Applicable only to new sanitary landfills or transfer stations}* Provide a statement summarizing the steps taken by the applicant to seek public comments as described in [Section II.B.](#) above, in addition to providing a copy of the public notice and a record of the public meeting. [Code of Virginia §10.1-1408.1 B.4. and B.5.; §9 VAC 20-81-450.B.4.]

#### E. Disposal Capacity Guarantee

Provide appropriate documentation corresponding to the type of proposed facility.

1. *{If the application is for a locality-owned sanitary landfill, new or expansion}*  
Provide a signed statement specifying the proposed sanitary landfill is locally-owned and will only accept waste generated within the member jurisdictions or from other jurisdictions under an interjurisdictional agreement. An example statement is provided in [Appendix B.1.](#)
2. *{If the application is for a privately-owned sanitary landfill, new or expansion}*  
Provide a signed statement guaranteeing that sufficient disposal capacity will be available in the facility to enable localities within the Commonwealth to comply with their Solid Waste Management Plans developed pursuant to [§9 VAC 20-130](#) and certifying that such localities will be allowed to contract for and reserve disposal capacity in the facility. Other documents such as a typical letter and a contract form that were sent to the localities as well as a list of the localities contacted should also be provided. An example statement is provided in [Appendix B.2.](#)
3. *{If the application is for a CDD or industrial landfill or other solid waste management facility}* No statement is required.

[Code of Virginia §10.1-1408.1 B.6.; §9 VAC 20-81-450.B.5.]

#### F. Host Agreement or Discussion of Disposal Limits/Service Area

Provide appropriate documentation corresponding to the type of proposed facility.

1. *{If the application is for a locally-owned and operated sanitary landfill, new or expansion}* Provide a Discussion of Disposal Limits/Service Area to include:
  - a. The primary access routes vehicles will use to access the site and the volume of daily traffic (number of vehicles) that will be traveling on the primary access routes. The traffic count should be consistent with the VDOT Adequacy Report required under [§9 VAC 20-81-460.G.](#) and must relate to the daily disposal limit.
  - b. The daily disposal limit, specified in either tons or cubic yards per day based on an anticipated waste density. (The typical density of municipal solid waste is



0.5 tons per cubic yard and CDD and industrial waste is 0.6 tons per cubic yard.)

- c. The service area of the facility. The service area should match the information provided for the Disposal Capacity Guarantee ([Section III.E.](#) above).
2. *{If the application is for a privately-owned sanitary landfill, new or expansion}*  
Provide a signed Host Agreement, DEQ Form SW-11-2.

This form is available on the DEQ Website:

<http://www.deq.virginia.gov/export/sites/default/waste/pdf/forms/localhacf.pdf>

3. *{If the application is for a CDD or industrial landfill or other solid waste management facility}* No information is required.

[Code of Virginia §10.1-1408.1 B.7. and B.8.; §9 VAC 20-81-450.B.6. and 450.B.7]

#### G. Demonstration of Need

*{Applicable to new solid waste management facilities or modifications requesting an expansion or increase in capacity}* Provide information supporting one of the following demonstrations.

1. *{If demonstration is based on §9 VAC 20-81-450.B.8.a}* Provide information and supporting documentation, as applicable, for each item requested under [§9 VAC 20-81-450.B.8.a.\(1\) through \(9\)](#), and [§10.1-1408.1 D.1\(i\) through \(vi\)](#). If a section does not apply to the proposed solid waste management facility, indicate so with reasonable explanations.
2. *{If demonstration is based on §9 VAC 20-81-450.B.8.b – for sanitary landfill only}*  
Provide a discussion that based on current or projected disposal rates, there is less than 10 years of disposal capacity remaining in the facility and information demonstrating either of the following:
  - a. The available disposal capacity for the state is *less than 20 years* according to the most current [Annual Solid Waste Report](#), prepared and published by DEQ, based on the information or reports submitted to the DEQ by the facilities in the state pursuant to the Solid Waste Information and Assessment Program (SWIA) in [§9 VAC 20-81-80](#)

OR

- b. The available permitted disposal capacity is less than *20 years* either in:
  - i. The planning region, or regions, immediately contiguous to the planning region of the host community, or
  - ii. The facilities within a 75 mile radius of the proposed facility.

Also, provide a discussion addressing the requirements of [§10.1-1408.1 D.1](#) so the Director can evaluate whether there is a need for the additional capacity. Please

reference other sections of the Notice of Intent in lieu of repeating information.  
Any items not addressed in other sections should be addressed here.

[Code of Virginia §10.1-1408.1 D.1.; §9 VAC 20-81-450.B.8.]

#### H. SCC Certification

*{This certification is not required for those facilities owned solely by governmental units}* Provide the Certification of Incorporation and either a Certificate of Good Standing (for corporations) or a Certificate of Fact (for LLCs) from the State Corporation Commission (SCC) for the designated owner and/or operator as indicated on the Disclosure Statement ([Section III.B.](#)). The certified business entity should be listed as the applicant, principal, insured, or grantor on the financial assurance mechanism provided (see [Section V.N.](#) below). [§9 VAC 20-81-450.B.10.]

#### IV. PART A PERMIT APPLICATION

---

The Part A Permit Application provides information essential for assessment of the site suitability for the proposed facility. According to [§9 VAC 20-81-450.C.1.](#), the applicant shall provide three copies of the Part A Permit Application and the attachments specified in [§9 VAC 20-81-460](#). Please check with the DEQ Regional Office responsible for the proposed location of the facility to determine the number and format of copies desired.

##### A. Application Form

Provide a transmittal letter stating the type of facility proposed with a signed and certified DEQ Form SW PTA. Mark entries that do not pertain to the type of the permit being applied for with "N/A" rather than leaving them blank. The attachments as specified on the form, are discussed further below, and should be submitted in the order prescribed [§9 VAC 20-81-460.A.]

This form is available on the DEQ Website:

<http://www.deq.virginia.gov/export/sites/default/waste/forms/parta.pdf>

##### B. Permit Application Fee

Submit a check, draft, or postal money order made payable to the Treasurer of Virginia for the required permit application fee in accordance with the Solid Waste Management Facility Permit Action Fees and Annual Fees regulation ([9 VAC 20-90](#)) to DEQ Accounts Receivable, P.O. Box 1104, Richmond, Virginia 23218. A copy of the check (with account and routing numbers blacked out), draft, or postal money order should accompany the permit application submitted to the DEQ Regional Office. Applications not accompanied by the proper fee or containing insufficient fees will be considered incomplete and shall not be processed by the Department. [§9 VAC 20-81-450.C.1.; §9 VAC 20-90-60.]

##### C. PTA Attachments I through VIII

The items specified as the first eight attachments to DEQ Form SW PTA are the documents required as part of the Notice of Intent specified in [Section III](#). If the NOI was submitted prior to the Part A Application, provide complete NOI documents in their respective Attachments; otherwise, submit the required NOI documents as part of the Part A Application. [§9 VAC 20-81-450.B.]

##### D. PTA Attachment IX: Key Map, Near-Vicinity Map, and Regional Map

###### 1. Key Map

Include one or more key maps delineating the general location of the proposed facility. The key map should be plotted on a seven and one-half minute United States Geological Survey topographical quadrangle. The quadrangle should be the most recent revision available and should include the name of the quadrangle, delineate the general location of the proposed facility, and show all important features within one (1) mile from the perimeter of the proposed facility boundary. [§9 VAC 20-81-460.B.]

## 2. Near-Vicinity Map

The vicinity map shall have a minimum scale of 1 inch equals 200 feet and should delineate an area of 500 feet from the perimeter of the property line of the proposed facility. The vicinity map may be produced with a reduced scale if it does not fit on one sheet, and then multiple sheets may be used to meet the minimum scale requirement.

The map shall be certified by a professional engineer or professional geologist and depict the following:

- All homes, buildings or structures including the layout of the buildings which will comprise the proposed facility;
- The surveyed property boundary, facility boundary, and waste management boundary, and the acreages within those boundaries;
- The disposal unit boundary within the boundaries of the proposed facility;
- Lots and blocks from the tax map for the proposed facility and all adjacent properties;
- The base floodplain or a note indicating the expected flood occurrence period for the area and include the source of data (Federal Insurance Administration Map) or calculations;
- Existing land uses and zoning classifications;
- All water supply wells, springs or intakes, both private and public;
- All utility lines, pipelines or land-based facilities (e.g., mines or wells); and
- All parks, recreation areas, surface water bodies, dams, historic areas, wetlands, monuments, cemeteries, wildlife refuges, unique natural areas, or similar features.

[§9 VAC 20-81-460.C.]

## 3. Regional Map

*{Applicable only to sanitary landfills}* Provide a map certified by a professional engineer or professional geologist identifying the following features within one (1), three (3) and five (5) miles of the proposed waste management boundary.

- Existing surface or groundwater public water intakes or reservoirs;
- Any impounding structures (dams);
- Sinkholes or other features associated with karst terrain;
- Airports;
- Park and recreational areas;
- Wildlife management areas;
- Marine resources;
- Wetlands;
- Historic Sites;
- Fish and Wildlife; and
- Tourism Opportunities.

[§9 VAC 20-81-120.C.3., 120.I., and 460.H.]

#### E. PTA Attachment X: Proof of Ownership Documents

Provide a copy of deed, lease, or other certification of ownership of the proposed site. [§9 VAC 20-81-460.D.]

#### F. PTA Attachment XI: Hydrogeologic and Geotechnical Report

*{If the application is for a solid waste disposal facility regulated under Part III (9 VAC 20-81-100 et seq.)}* Submit a site hydrogeologic and geotechnical report certified by a professional geologist or professional engineer registered for practice in the Commonwealth. The following format is provided to ensure all regulatory requirements are addressed in the report.

**Format.** The format used for the Hydrogeologic and Geotechnical Report should encourage clear analysis and presentation of the site hydrogeologic and geotechnical investigations completed to determine site suitability for a solid waste disposal facility. The Report should start with a title page and table of contents followed by the following sections and discussions. The title page should identify the facility name and permit number, the permit applicant, document date, and document preparer information. In addition, the header or footer of each page should include the facility name, permit number, document title, revision date, and page number.

##### I. Purpose and Methods

The purpose of the report is to accomplish two tasks: (1) define the geology beneath the site area with an assessment of the availability and suitability of on-site soils for use in constructing the proposed landfill and an assessment of subsurface foundation and (2) identify the groundwater flow paths and rates of the uppermost aquifer. A variety of investigatory techniques/methods have been used during these activities for collecting information and data is discussed under each of the following sections as necessary and appropriate. [§9 VAC 20-81-460.E.1.]

##### II. Boring Records

###### A. Number of Borings

Indicate the number of borings completed as part of this investigation, comparing the number completed with the number required based on the proposed waste management boundary acreage as indicated in Table 5.1 of [§9 VAC 20-81-460.E.1.a.](#)

###### B. Location of Borings

Provide a discussion indicating how boring locations were selected. Borings shall be located in a grid pattern in an effort to identify each major geomorphic feature and to enable the development of detailed cross-sections of the proposed facility. Reference the map provided in [PTA Attachment XII](#). [§9 VAC 20-81-460.E.1.a. and d.]

**C. Depth of Borings**

Provide a summary of the drilling methods used to determine the thickness of the uppermost aquifer. Borings shall be drilled continuously for the first 20 feet below the proposed lowest elevation of solid waste disposal (base grade) or to bedrock. Provide a table identifying the boring ID, the boring depth and elevation (both from the existing ground and from the proposed base grade), and the boring's status (i.e. boring converted to piezometer or observation well, boring sealed, boring terminated at bedrock, etc.). Reference the boring logs provided in [PTA Attachment XII](#). [§9 VAC 20-81-460.E.1.a. and e.]

**D. Samplings**

Provide a summary of the methods used such as using standard penetration test (SPT) and split-barrel sampling (ASTM D1586) to collect boring samples. At a minimum, boring samples shall be collected continuously for the first 20 feet below the lowest elevation of the proposed solid waste disposal facility or to bedrock, whichever is shallower. Additional samples, as determined by the professional geologist or engineer shall be collected at five-foot intervals thereafter. Also, provide a description of any excavations, test pits, or other geophysical methods employed to supplement the soil boring investigation. [§9 VAC 20-81-460.E.1.a., e., and f.]

**E. Observation Wells**

Identify the borings that were converted to water level observation wells, well nests, piezometers, or piezometer nests, referencing the table provided in Section II.C. of this report. At a minimum, four borings shall be converted to allow determination of the rate and direction of groundwater flow across the site. The total number of wells or well nests shall be based on the complexity of the geology of the site, as determined by this investigation. [§9 VAC 20-81-460.E.1.g.]

**F. In-Situ Hydraulic Conductivity**

Describe the methods and results of the field tests conducted to determine the in situ hydraulic conductivity of the uppermost aquifer. Provide the range and average values of hydraulic conductivity determined. Field data, laboratory reports, and supporting calculations should be provided in [PTA Attachment XIII](#). [§9 VAC 20-81-460.E.1.h.]

**G. Sealing of Borings**

Provide a summary of the techniques used or to be used to seal all borings not converted to permanent monitoring wells and those wells located within the proposed solid waste disposal area (waste management boundary). In addition, provide a summary of the methods used to backfill and compact all test pits and excavations. Proper sealing and backfilling with material at least an order of magnitude less permeable than surrounding material is necessary

to prevent possible paths of leachate migration. It is recommended that those borings located within the waste management boundary be sealed completely with bentonite. [§9 VAC 20-81-460.E.1.i.]

### **III. Geotechnical Report**

#### **A. Description of Soil Units**

Provide a description of the soil units based on USCS classification and its consistency (e.g. soft, stiff, very stiff, loose, compact, etc.) including estimates of soil unit thickness, continuity across the site, and genesis. Laboratory determinations of the soil unit's physical properties including natural moisture, Atterberg limits, natural unit weight, method of sampling, particle size distribution, specific gravity, percent compaction of the test sample, remolded density and remolded moisture content, the percent saturation of the test sample, soil shear and compressibility properties, and other related test results. [§9 VAC 20-81-460.E.2.b.(1)]

Also, perform sufficient laboratory analyses to provide information concerning petrologic variation, sorting (for unconsolidated sedimentary units), cementation (for consolidated sedimentary units), moisture content, and hydraulic conductivity of each significant geologic unit or soil zone above the confining layer. Perform sufficient laboratory analyses to describe the mineralogy, degree of compaction, moisture content, and other pertinent characteristics of any clays or other fine-grained sediments identified as the confining layer. Suggested laboratory methods can be found in [Appendix C.1](#).

This section should include corroborating and supporting data that will provide the evidence that (1) the facility will not be sited in geologically unstable areas [§9 VAC 20-81-120.B.] and (2) the facility will not be located in wetlands [§9 VAC 20-81-120.E.].

Present all sieve analysis, density, Atterberg limits, moisture content, other related data in [PTA Attachment XIII](#).

#### **B. Remolded Hydraulic Conductivity**

Provide a description of remolded hydraulic conductivity data for the soil units that are proposed for use as a drainage layer, impermeable cap or impermeable liner material, as supported by laboratory determinations.

Remolded hydraulic conductivity tests require a Proctor compaction test (ASTM D698 or D1557) soil classification, liquid limit, plastic limit, particle size distribution, specific gravity, percent compaction of the test sample, remolded density and remolded moisture content, and the percent saturation of the test sample. Proctor compaction test data and hydraulic conductivity test sample data should be plotted on standard moisture-density test graphs. All test results as described herein should be provided in [PTA Attachment XIII](#). [§9 VAC 20-81-460.E.2.b.(2)]

**C. Volume of Materials**

Provide an estimate of the available volume of materials suitable for use as liner, cap, and drainage layer for the proposed solid waste disposal facility, in addition to discussing the anticipated uses of all on-site materials. Calculations substantiating the information provided in this section should be provided in [PTA Attachment XIV](#). [§9 VAC 20-81-460.E.2.b.(3)]

**IV. Hydrogeologic Report****A. Water Table Information****1. Groundwater Level Measurements**

Provide a summary of the methods used to determine static water levels in each of the monitoring, piezometer, or observation wells as performed to create the potentiometric surface map(s) provided in [PTA Attachment XV](#). Include a summary table identifying the well ID, elevation of the well casing top, depth to water within the well, and subsequent groundwater elevation. [§9 VAC 20-81-460.E.2.c.(1)]

**2. Vertical Flow Components**

Provide a description of vertical flow components observed in different wells during the process of data collection. [§9 VAC 20-81-460.E.2.c.(1)]

**3. Seasonal and Temporal Factors**

Include an assessment of the factors that may result in short- or long-term variations in the measured groundwater level and flow patterns. Such factors may include:

- Infiltration from precipitation;
- Off-site well pumping, recharges, and discharges;
- Tidal processes or other intermittent natural variations (e.g., river stage);
- On-site well pumping; and
- Off-site and on-site construction or changing land use patterns.

[§9 VAC 20-81-460.E.2.c.(1)]

**B. Field Procedures and Results**

Provide a discussion of field test procedures and results, laboratory determinations made on undisturbed samples, recharge areas, discharge areas, adjacent or areal usage, and typical radii of influence of pumping wells. [§9 VAC 20-81-460.E.2.c.(2)]



**C. Description of Site Geology**

Provide a discussion of the regional geologic setting, the site geology and a cataloging and description of the uppermost aquifer from the site investigation and from referenced literature. The geologic description shall include a discussion of the prevalence and orientation of fractures, faults, and other structural discontinuities, and presence of any other significant geologic features. [§9 VAC 20-81-460.E.2.c.(3)]

**D. Description of Aquifer**

Provide a description addressing the aquifer's homogeneity, horizontal and vertical extent, isotropy, the potential for ground water remediation, if required, and the factors influencing the proper placement of a ground water monitoring network. [§9 VAC 20-81-460.E.2.c.(3)]

*{If the application is for a solid waste management facility regulated under Part IV (9 VAC 20-81-300 et seq.)}* Submit a report cataloging and describing the aquifers, geologic features, or any similar characteristic of the site that might affect the operation of the facility or be affected by that operation. Discussion on the types of information to be provided is discussed above.

**G. PTA Attachment XII: Location of Borings and Boring Logs**

Provide a map certified by a professional engineer or professional geologist identifying the facility and waste management boundaries and the locations of all borings completed as part of the hydrogeologic and geotechnical site evaluation. Following the map, detail boring logs for each boring and well as-builts for each boring converted to an observation well, well nest, piezometer, or piezometer nest should be included. At a minimum, each boring log shall include:

- The type of drilling and sampling equipment used;
- The date each boring was started and finished;
- A soil or rock description in accordance with the United Soil Classification System (USCS) or Rock Quality Designation;
- The method of sampling;
- The elevation and depth of sample collection;
- The water levels encountered; and
- The Standard Penetration Test blow counts.

In addition, boring locations and elevations shall be surveyed with a precision of 0.01 foot. At least one surveyed point shall be indelibly marked by the surveyor on each well. All depths of soil and rock as described on the boring log shall be corrected to National Geodetic Vertical Datum, if available. [§9 VAC 20-81-460.E.2.a.]

#### H. PTA Attachment XIII: Laboratory and Field Data

Copies of laboratory test results and field data collected during the hydrogeologic and geotechnical investigation should be provided in this attachment. [§9 VAC 20-81-460.E.]

#### I. PTA Attachment XIV: Materials Volume Calculations

Provide calculations substantiating the information provided in Section III.C. of the Hydrogeologic and Geotechnical Report. [§9 VAC 20-81-460.E.2.b.(3)]

#### J. PTA Attachment XV: Geologic Maps, Orthogonal Cross-Sections, and Potentiometric Surface Maps

##### 1. Geologic Maps

A geologic map(s) of the proposed area based on the borings and literature review should be provided at a scale of 1 inch = 200 feet showing ground surface contours, various geologic formations locations of the uppermost aquifer and aquifer hydraulically interconnected beneath the facility and, if present, the extent of the plume of contamination that has entered the groundwater from existing units.

Published geologic maps at a scale of 1:24,000 or larger; published regional geologic maps at a scale of 1:250,000 or larger; or other published map may be submitted in lieu of the site specific map. [§9 VAC 20-81-460.E.2.c.(4)]

##### 2. Orthogonal Cross-Sections

Provide an overall facility map indicating the location of each cross section and at least two generally orthogonal, detailed site specific cross section maps depicting significant geologic or structural trends identified on the geologic maps and reflecting features in relation to local and regional groundwater flow. Each cross section should show the approximate construction of landfill base grades, water table, surficial features, petrography of significant formations, significant structural features, stratigraphic contacts between formations, zones of high permeability or fracture, the location of each borehole, depth of termination, depth to the zone of saturation, and depiction of any geophysical logs along the line of the cross section. These maps should be certified by a professional engineer or professional geologist. [§9 VAC 20-81-460.E.2.c.(5)]

##### 3. Potentiometric Surface Maps

Provide a potentiometric surface map(s) certified by a professional engineer or professional geologist estimating the uppermost aquifer that defines the groundwater conditions encountered below the proposed solid waste disposal area based on stabilized elevations. A map should be provided for each set of groundwater elevation data available. In constructing a potentiometric surface map the applicant should have used raw data from piezometers or wells screened at equivalent stratigraphic horizons. Information obtained from the piezometer

cluster readings shall be used to construct flow nets in addition to surface maps.  
[§9 VAC 20-81-460.E.2.c.(6)]

**K. PTA Attachment XVI: VDOT Adequacy Report and Approval Letter**

1. *{If the application is for a sanitary landfill}* Provide a copy of the adequacy report submitted to the Virginia Department of Transportation (VDOT) or other responsible agency and subsequent approval letter. The report should address the adequacy of transportation facilities that will be available to serve the disposal facility, including daily travel routes and traffic volumes that will correlate with the daily disposal limit, road congestion, and highway safety. An example VDOT approval letter is provided in [Appendix C.2](#). [Code of Virginia §10.1-1408.1 D.1. and 1408.4.A.1.; §9 VAC 20-81-460.G.]
2. *{If the application is for a CDD or industrial landfill or other solid waste management facility}* Provide a copy of the letter issued by the Virginia Department of Transportation indicating sufficient infrastructure exists/will exist to safely handle the proposed waste flow. An example VDOT approval letter is provided in [Appendix C.3](#). [Code of Virginia §10.1-1408.1 D.1]

**L. PTA Attachment XVII: Landfill Impact Statement**

*{Applicable only to sanitary landfills}* Submit a report certified by a professional engineer or professional geologist discussing the environmental impact of the proposed sanitary landfill on parks and recreational areas, wildlife management areas, critical habitat areas of endangered species as designated by applicable local, state, or federal agencies, public water supplies, marine resources, wetlands, historic sites, fish and wildlife, water quality, and tourism. The required report shall be referred to as a Landfill Impact Statement (LIS). It is similar to but not the same as an Environmental Impact Statement (EIS) required by [40 CFR Part 6](#). The applicant shall contact the appropriate state and federal agencies to request their opinion on the impact of the landfill in the areas listed above. The applicant shall provide all necessary documentation and maps to these agencies. The applicant shall provide to the Department a comprehensive report of the findings of the agencies and its own consultants. The impact statement shall consider landfill siting and configuration alternatives and will discuss the reasons why each alternative is/is not feasible. Impacts and any potential solutions to each impact shall be discussed. [Code of Virginia §10.1-1408.4 A.2. and B.6.; §9 VAC 20-81-460.H.]

**Format.** The format used for the LIS should encourage clear analysis and presentation of alternatives including the proposed action and the environmental, economical, and social impacts. The LIS should start with a title page and table of contents followed by the following sections and discussions. The title page should identify the facility name and permit number, the permit applicant, document date, and document preparer information. In addition, the header or footer of each page should include the facility name, permit number, document title, revision date, and page number.

**I. Executive Summary**

Provide an executive summary of the Landfill Impact Statement (LIS), starting with a brief description of the proposed facility.

**II. Purpose of and Need for Action**

The purpose and need of the LIS is to assess the environmental impact of the proposed sanitary landfill on existing parks and recreation areas; wildlife management areas; critical habitat areas of endangered species as designated by applicable local, state, or federal agencies; public water supplies; marine resources; wetlands; historic sites; fish and wildlife; water quality and tourism.

**III. Alternatives, including the Selected Alternative**

Discuss the advantages and disadvantages of several alternatives for siting a new landfill or for expansion of an existing sanitary landfill, as appropriate, and select an alternative with proper justification.

**IV. Affected Environments of the Selected Alternative**

Referencing the Regional Map provided in [PTA Attachment IX](#), as appropriate, discuss the following features which may be impacted as a result of the selected alternative. Correspondence received from applicable local, state, or federal agencies addressing the proposed facility's environmental impact on these features along with record search results should be provided as an Appendix to the LIS.

**A. Parks and Recreation Areas**

Identify the parks and recreational areas located within 5 miles of the proposed facility. Discuss the potential impact to these areas based on correspondence between the applicant/consultant and the Virginia Department of Conservation and Recreation (DCR) or other applicable local, state, or federal agencies. Provide Best Management Practices (BMPs), as approved, suggested, or supported by DCR or other agencies, to be used during construction and operation of the proposed facility that will minimize and/or eliminate the environmental impacts identified.

**B. Wildlife Management Areas**

Identify the wildlife management/critical habitat areas of endangered species located within 5 miles of the proposed facility as identified by the Department of Conservation & Recreation (DCR) Division of Natural Heritage or other applicable local, state, or federal agencies. [DCR's Natural Heritage Information Resources](#) and/or their subscriber-based [Data Explorer](#) can be used to help compile a list of habitats of rare, threatened, or endangered plant and animal species within 5 miles of the proposed facility.

Discuss the potential impact to the wildlife management areas identified and provide BMPs, as approved, suggested, or supported by DCR or other agencies,

to be used during construction and operation of the facility that will minimize and/or eliminate the environmental impact.

**C. Public Water Supplies**

Identify the public water supplies located within 5 miles of the proposed facility as identified by the Virginia Department of Health (VDH) or other applicable local, state, or federal agencies. Discuss the potential impact to these supplies and provide BMPs, if necessary, to be used during construction and operation of the facility that will minimize and/or eliminate the environmental impact. Keep in mind the statute limitations of [§10.1-1408.4 B.3.](#) in regards to the proximity of a landfill to a public water supply well. [§9 VAC 20-81-120.C.3.a.(1) and (2)]

*{If existing surface or groundwater public water supply intakes or reservoirs are located between one (1) mile and three (3) miles of the perimeter of the waste management boundary}* Provide the information as requested in Guidance Memo No. 04-2005 Sanitary Landfill Siting Relative to a Public Water Supply Intake or Reservoir, demonstrating that the proposed facility will meet the requirements of [§10.1-1408.4 B.3.\(i\) through \(v\)](#).

*{If the landfill is downgradient of all public water supply intakes or reservoirs}* Provide information to prove that no well, spring, or other groundwater source of drinking water is located within 500 feet of the proposed location. The demonstration should include information and calculations of radius of influence (i.e. cone of depression) to show that pumping rates of these sources do not cause the landfill to become upgradient of these sources.

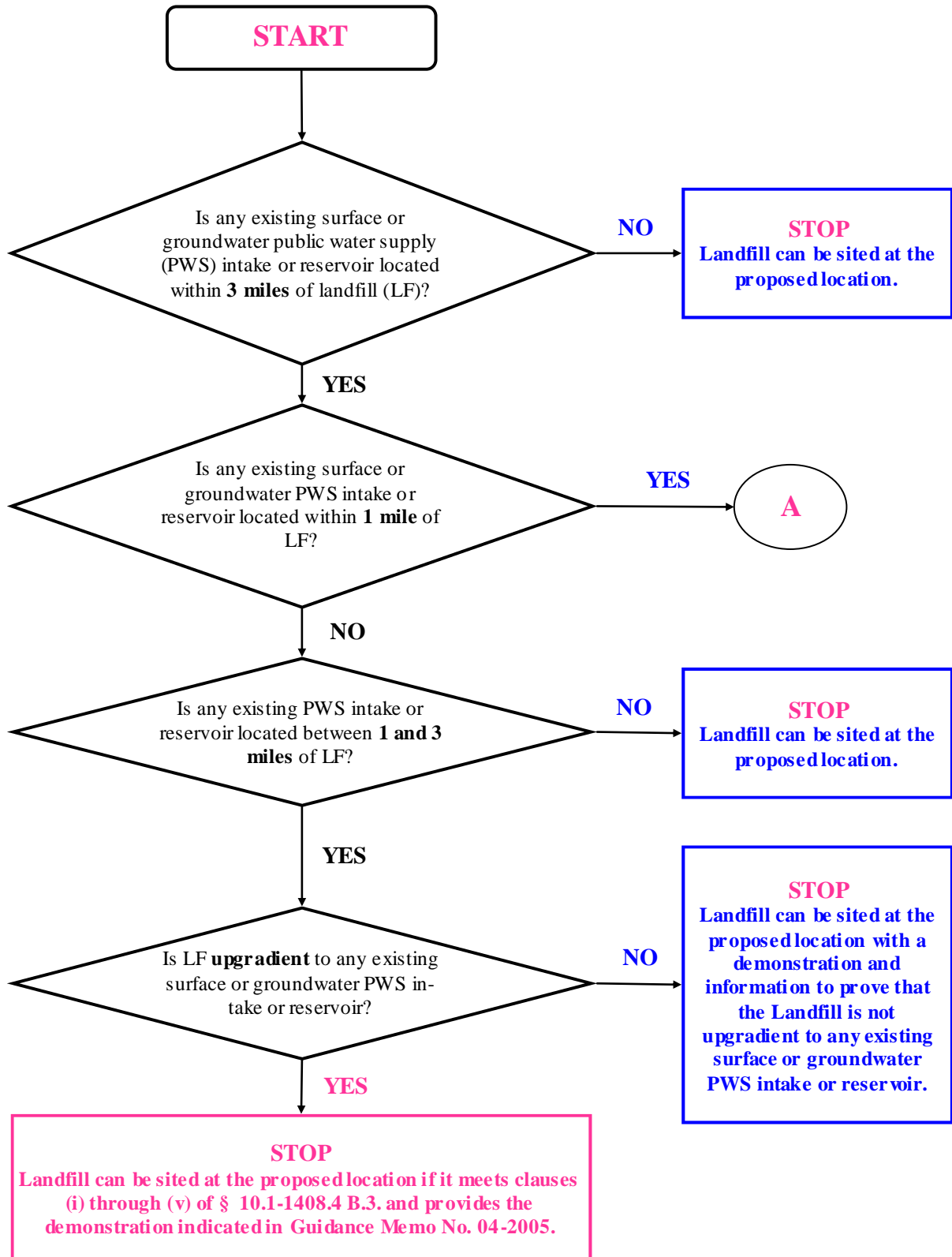
*{If existing surface or groundwater public water supply intakes or reservoirs are located within one (1) mile downgradient of the perimeter of the waste management boundary, the landfill can **NOT** be sited at the proposed location}*

FIGURE 1 is a flowchart that can be used to determine whether the proposed new landfill or landfill expansion can be sited at the proposed location in relation to proximity to public water supply supplies.

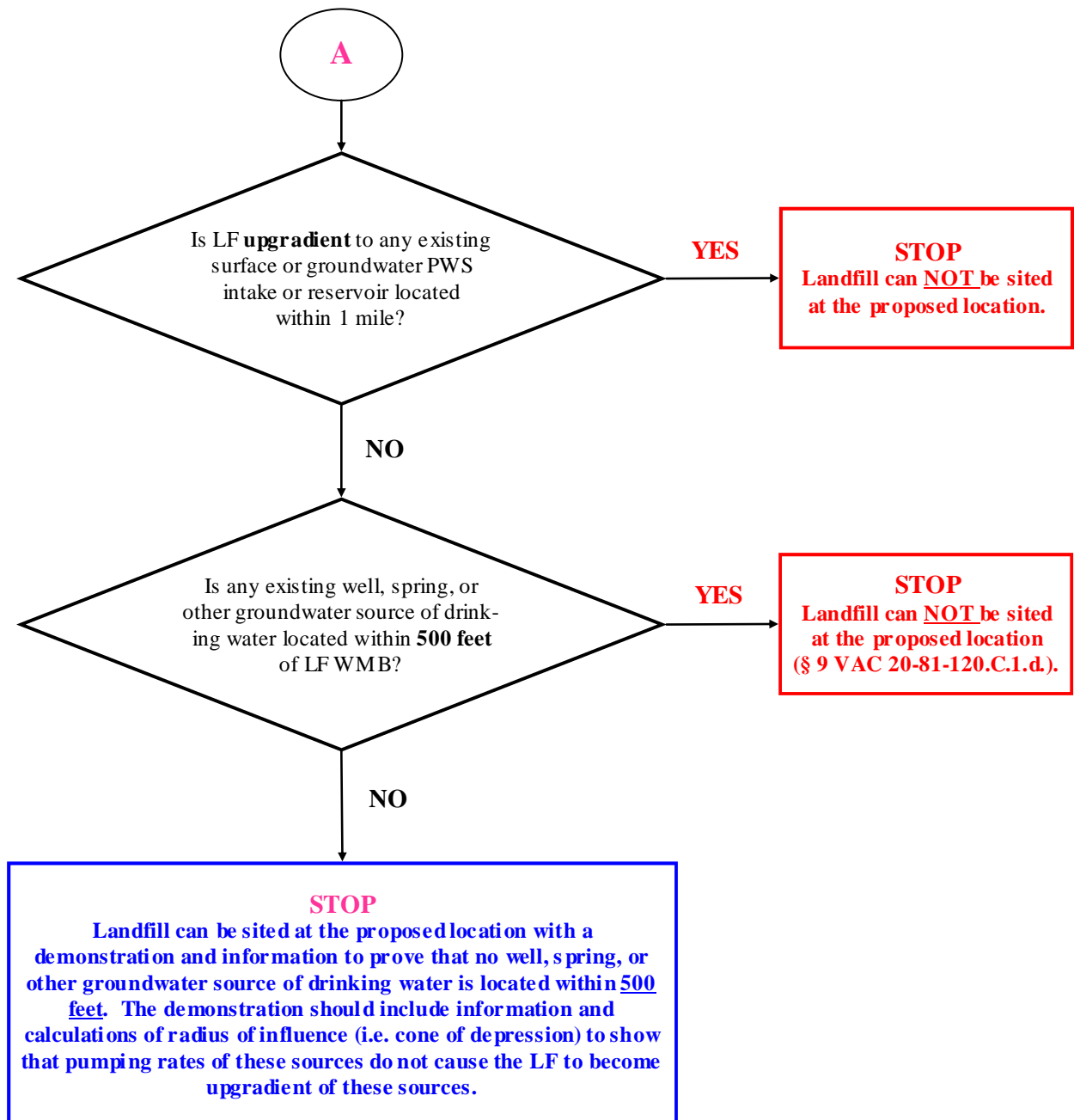
**D. Marine Resources**

Identify any marine resources located within 5 miles of the proposed facility as identified by applicable local, state, or federal agencies. Discuss the potential impact to these resources and provide BMPs to be used during construction and operation of the facility that will minimize and/or eliminate the environmental impact.

**FIGURE 1** Flowchart for siting a sanitary landfill with respect to proximity to existing surface or groundwater public water supply intake or reservoir in accordance with Code of Virginia §10.1-1408.4 B.3.



**FIGURE 1** Flowchart for siting a sanitary landfill with respect to proximity to existing surface or groundwater public water supply intake or reservoir in accordance with Code of Virginia §10.1-1408.4 B.3. – *continued*



**E. Wetlands**

Identify the amount and types of wetlands located within 5 miles of the proposed facility as identified on United States Geological Survey (USGS) quadrangle maps, National Wetlands Inventory (NWI) maps, and Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM). Discuss the potential impact to these resources and provide BMPs to be used during construction and operation of the facility that will minimize and/or eliminate the environmental impact.

**F. Historic Sites**

Identify the historic resources located within 5 miles of the proposed facility as identified by the Virginia Department of Historic Resources (DHR) or other applicable local, state, or federal agencies. DHR's [Data Sharing System](#) should be used to identify Virginia Landmarks Register (VLR) listed and eligible historic resources located within 5 miles of the proposed facility. Discuss the potential impact to the identified sites and provide BMPs, as approved, suggested, or supported by DHR or other applicable agencies, to be used during construction and operation of the facility that will minimize and/or eliminate the environmental impact.

**G. Fish and Wildlife**

Identify the fish and wildlife resources located within 5 miles of the proposed facility as identified by Virginia Department of Game and Inland Fisheries (DGIF) or other applicable local, state, or federal agencies. [DGIF's Virginia Fish and Wildlife Information Service](#) web-based application and/or DGIF's subscriber-based [Wildlife Environmental Review Map Service](#) can be used to help compile a list of potential threatened and endangered species within 5 miles of the proposed facility. Discuss the potential impact to these resources and provide BMPs, as approved, suggested, or supported by DGIF or other applicable agencies, to be used during construction and operation of the facility that will minimize and/or eliminate the environmental impact.

**H. Water Quality**

Identify the surface and groundwater resources located within 5 miles of the proposed facility. Discuss the potential impact to these resources and provide BMPs, if necessary, to be used during construction and operation of the facility that will minimize and/or eliminate the environmental impact.

**I. Tourism**

Identify the tourism opportunities located within 5 miles of the proposed facility, as identified by local government and businesses, and DCR. Discuss the potential impact to these opportunities and provide BMPs to be used during construction and operation of the facility that will minimize and/or eliminate the environmental impact.



**V. Environmental Consequences of the Alternatives**

Discuss the environmental consequences of each of the alternatives presented in Section III of this LIS, such as loss of land used for forestry, agriculture, or other purposes, wetlands and streams, if any, noise pollution, odor, and traffic.

Discuss how the environmental consequences of the alternatives will be mitigated by meeting the regulatory requirements of the Virginia Waste Management Act and the Solid Waste Management Regulations.

**VI. Coordination**

List the local, state, federal, and/or private agencies that have been contacted for information and environmental assessment.

**VII. List of Contributors**

List the consultants and/or agencies that contributed in the preparation of this LIS.

**VIII. References**

List the references and/or personal contact, if any, that are cited in the text of this LIS.

**M. PTA Attachment XVIII: Certification and Documentation of Adjacent Property Owner Notification**

Provide a statement signed by the applicant indicating all adjacent property owners or occupants have been notified of the intent to develop a solid waste management facility on the site. Include a copy of the notice sent and a list including the names and addresses of those notified. An example statement and notice provided are provided in [Appendix C.4.](#) and [Appendix C.5.](#) [§9 VAC 20-81-460.I.]

**N. PTA Attachment XIX: Discussion of Public Interest Served**

Provide a discussion on how the public interest will be served by the proposed facility based on one or more of the conditions listed under [§9 VAC 20-81-460.K.1. through K.7.](#)

**O. PTA Attachment XX: Airport Proximity and Agency Coordination**

*{For sanitary landfills located within 5 miles of any airport runway end used by turbojet or piston-type aircraft}* Provide copies of the notification sent in accordance with [§9 VAC 20-81-120.I.2.](#) concerning the proposed facility's proximity to the airport and correspondence received from the affected airport, local aviation authority, and the Federal Aviation Administration (FAA) in response. Restrictions imposed by the FAA or local airport may be incorporated into the Part A Authorization issued.

*{For sanitary landfills located within 10,000 feet of any airport runway end used by turbojet aircraft or within 5,000 feet of any airport runway end used by piston-type aircraft}* Provide a demonstration that the proposed facility will not pose a bird hazard

to aircraft within specified distances of an airport runway by addressing the following information:

**1. Distance**

Referencing the Regional Map included in [PTA Attachment IX](#), indicate the minimum distance between the proposed waste management boundary and the airport runway. This value should coincide with the response to question 9.h. on DEQ Form SW PTA.

**2. Public Use**

The regulatory requirement for setback from an airport does not apply to private airfields. Whether the airport is a public-use facility should be readily determined by contacting the airport administration, Virginia Department of Aviation, or the regional FAA office. A copy of the determination shall be included in this Attachment.

**3. Increased Bird Hazard**

Indicate the proposed facility design features and operational practices that will be employed to minimize the likelihood of increased bird/aircraft collisions.

Proposed waste management techniques may include:

**a. Frequent covering of wastes that provide a source of food**

The application shall include the description of volume and type of wastes, waste delivery schedules, size of the working face, and frequency of cover applied to keep the working face small. By maintaining a small working face, spreading and compaction equipment are also concentrated in a small area which further disrupts scavenging by the birds.

**b. Shredding, milling, or baling the food-containing waste**

The applicant may elect to mill, shred, or bale the food-containing waste making the waste no longer attractive to birds.

**c. Other Methods**

The applicant may include other methods with limited long-term effect such as visual or sound deterrents, physical barriers such as fine wires, and firearms. Some of these methods may concentrate on the denial of nesting areas.

**4. Estimation of Likelihood of Increased Risk**

In addition to design features and operational procedures to control bird populations, the demonstration should also address the likelihood that the disposal unit will increase bird/aircraft collisions and result in damage to the aircraft or injury to its occupants. One approach to addressing this portion of the airport safety criteria is to evaluate the attraction of birds to the unit and determine whether this increased population would be expected to result in a discernable increase in bird/aircraft collisions. The evaluation of bird attraction can be based on field observations at existing facilities where similar design features and operational procedures are used. All observations, measurements, data,

calculations and analyses, and evaluations shall be documented and included in the demonstration.

**P. PTA Attachment XXI: FEMA Flood Insurance Rate Map**

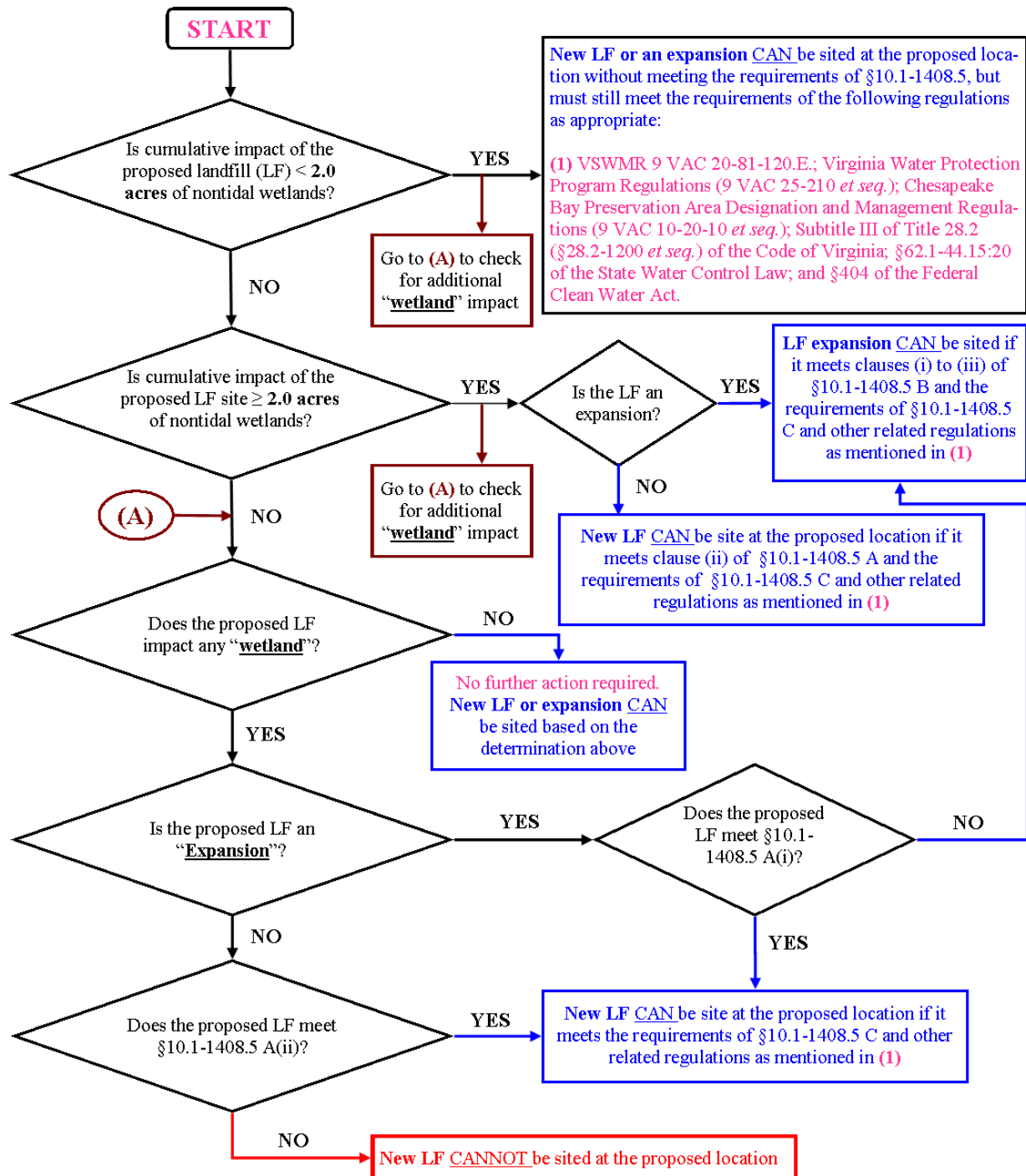
In support of question 1 on DEQ Form SW PTA, provide a copy of the FEMA Flood Insurance Rate Map (FIRM) showing the proposed facility is not located within the 100-year floodplain. [§9 VAC 20-81-120.A.]

**Q. PTA Attachment XXII: Wetlands Demonstration and Agency Coordination**

*{If the response to question 6. on DEQ Form SW PTA is yes}* Review [Guidance Memo No. 03-2005: Guidance for the implementation of HB2192 regarding wetlands siting and increased groundwater monitoring originally issued as Guidance 02-1999](#), to determine whether the proposed landfill can be sited. As indicated in the Guidance Memo, provide the necessary information and documentation indicating the facility meets the requirements of Code of Virginia [§10.1-1408.4 B.2.](#) and [§10.1-1408.5 E.](#) and VSWMR [§9 VAC 20-81-120.E.3.](#) [FIGURE 2](#) is a flowchart that can be used to determine whether the proposed new landfill or landfill expansion can be sited at the proposed location.

In addition, a Wetland Delineation Map and copies of the Wetland and Stream Impact Permits issued by the Army Corps of Engineers and/or the Virginia Water Protection Program should be provided here. As indicated in [Waste Guidance Memo 06-2005 and Water Guidance Memo No. 05-2012: Coordination of Permitting Requirements for Wetlands and the Siting of Solid Waste Landfills](#) and Clarification Memo issued April 13, 2009 (see [FIGURE 3](#)), wetlands and stream impact permits will need to be issued prior to the applicant receiving a Part A Authorization.

**FIGURE 2** Flowchart for siting a sanitary landfill with wetlands impacts in accordance with §10.1-1408.5 of the Code of Virginia




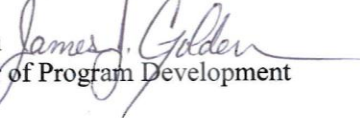
**"Wetland"** - means any tidal wetland or nontidal wetland contiguous to any tidal wetland or surface water body (§10.1-1408.5 E).

**"Expansion"** - includes the siting and construction of new cells or the expansion of existing cells at the same location (§10.1-1408.5 A).

This definition of "expansion" applies to only §10.1-1408.5 of the Code of Virginia.

**Special Note** - Since isolated wetlands are not included in the definition of the Code of Virginia, §10.1-1408.5, the flowchart does not apply to any isolated wetlands. New LF or the expansion impacting any acreage of isolated wetlands can be sited as the jurisdictional shown on the Part A Application map and meeting all the requirements as mentioned in (1).

**FIGURE 3** Wetlands Permits and Solid Waste Part A Applications Clarification of Guidance Memo 06-2005

	<u><b>MEMORANDUM</b></u>
TO:	Regional Waste Program Managers
FROM:	James J. Golden  Deputy Director of Program Development
COPY:	Regional Solid Waste Permit Writers Solid Waste Permit Coordinators
DATE:	April 13, 2009
SUBJECT:	Wetlands Permits and Solid Waste Part A Applications Clarification of Guidance Memo 06-2005

---

In response to requests from regional staff and solid waste landfill applicants, this memo has been prepared to clarify coordination of wetland permits and the approval of Part A applications. In accordance with Guidance Document [GM06-2005](#), the Part A reviewer shall ensure the conditions of the Virginia Water Protection (VWP) wetland permit and the Part A approval letter are consistent. Recently, there has been some confusion regarding the implications of the United States Army Corps of Engineers (USACE) wetlands permit. Furthermore, numerous applicants have requested approval of the Part A application prior to final approval of the USACE wetlands permit. This memo serves as clarification that, in accordance with our regulatory requirements and guidance, a Part A application may be approved prior to final approval of the USACE permit if the DEQ VWP permit has been issued and the conditions of both the Part A and VWP permits are consistent. However, in these cases, it should be noted to the applicant that he accepts liability for any inconsistencies in the approved Part A application and final USACE permit. If such inconsistencies occur, the applicant is then responsible for submitting a revised Part A application and payment of associated permit amendment fees. Similarly, the applicant will be responsible for amending the Part B application to address any inconsistencies. If the Part B application has been reviewed and the final solid waste permit issued, the applicant will be responsible for amending the solid waste permit to satisfy the requirements of the USACE permit. The applicant is responsible for all associated solid waste permit fees necessary to amend the solid waste permit to be consistent with the USACE permit.

R. PTA Attachment XXIII: Demonstration Regarding Proximity to Fault or Siting within a Seismic Impact Zone

*{If the response to question 9.f. on DEQ Form SW PTA is less than 200 feet}* Provide a demonstration indicating that an alternate setback distance of less than 200 feet will prevent damage to the structural integrity of the facility and will be protective of human health and the environment.

*{If the response to question 9.g. on DEQ Form SW PTA is yes}* Provide a demonstration that all containment structures, including liners, leachate collection systems, and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site. Review [Guidance Memo 02-1993: Seismic Impact Zone, Part A Demonstration Requirements](#), for additional information regarding the demonstration to be submitted in this Attachment.

S. PTA Attachment XXIV: Request for Exemption of Site from the Requirements of §9 VAC 20-81-120.D. and/or 120.F.

*{If the application is for a CDD or industrial landfill and the applicant wishes to be exempt from the groundwater monitoring requirements of §9 VAC 20-81-250.}* The applicant shall provide a demonstration certified by a qualified groundwater scientist indicating that there is no potential for migration of any Table 3.1 constituents to the uppermost aquifer during the active life and post-closure care period of the landfill. This demonstration should address the requirements of [9 VAC 20-81-250.A.1.c.](#) and be provided in lieu of the Groundwater Monitoring Plan as [PTB Attachment X](#).

*{If any response to questions 7.a. through 7.e. on DEQ Form SW PTA is yes}* The applicant shall provide specific site conditions to be considered during the Director's review in addition to providing an explanation of precautions necessary to assure compliance with all design, construction, operation, and closure provisions of the VSWMR.

## V. PART B PERMIT APPLICATION

---

The Part B Permit Application should be submitted after the Part A Permit has been issued. The Part B Permit Application contains the detailed engineering design, monitoring, closure, and post-closure plans for the proposed facility. According to [§9 VAC 20-81-450.D.1](#), the applicant shall provide three copies of the Part B Permit Application and the attachments specified in [§9 VAC 20-81-470](#) or [480](#). Please check with the DEQ Regional Office responsible for the proposed location of the facility to determine the number and format of copies desired.

### A. Application Form

Provide a signed DEQ Form SW PTB. Mark entries that do not pertain to the type of the permit being applied for with "N/A" rather than leaving them blank. The attachments as specified on the form are discussed further below and should be submitted in the order prescribed. [§9 VAC 20-81-470.D.]

This form is available on the DEQ Website:

<http://www.deq.virginia.gov/export/sites/default/waste/forms/partb.pdf>

Directions for completing this form are also available:

[http://www.deq.virginia.gov/export/sites/default/waste/forms/Instructions\\_for\\_Completing\\_DEQ\\_Form\\_SW\\_PTB.pdf](http://www.deq.virginia.gov/export/sites/default/waste/forms/Instructions_for_Completing_DEQ_Form_SW_PTB.pdf)

### B. Permit Application Fee

Submit a check, draft, or postal money order made payable to the Treasurer of Virginia for the required permit application fee in accordance with the Solid Waste Management Facility Permit Action Fees and Annual Fees regulation ([9 VAC 20-90](#)) to DEQ Accounts Receivable, P.O. Box 1104, Richmond, Virginia 23218. A copy of the check (with account and routing numbers blacked out), draft, or postal money order should accompany the permit application submitted to the DEQ Regional Office. Applications not accompanied by the proper fee or containing insufficient fees will be considered incomplete and shall not be processed by the Department. [§9 VAC 20-81-450.D.1.; §9 VAC 20-90-60]

### C. PTB Attachment I: Notice of Intent

Provide a Notice of Intent cover letter for the Part B Application. Contents of the cover letter are specified in [Section III.A](#). [§9 VAC 20-81-450.B.]

### D. PTB Attachment II: VDOT Adequacy Report and Approval Letter

For a new application, provide a reference to [PTA Attachment XVI](#). This attachment is only applicable to permit modifications requesting increases in the facility's daily disposal limit. [§9 VAC 20-81-460.G.]



#### E. PTB Attachment III: Design Plans

1. *{If the application is for a solid waste disposal facility}* See *Submission Instruction No. 2: Design Plans and Report for Solid Waste Disposal Facilities* for detailed instructions regarding the Design Plans to be submitted in this Attachment.
2. *{If the application is for a waste to energy, thermal treatment, or incineration facility}* See *Submission Instruction No. 3: Design Plans and Report for Waste to Energy, Thermal Treatment, and Incineration Facilities* for detailed instructions regarding the Design Plans to be submitted in this Attachment.
3. *{If the application is for any other solid waste management facility}* See *Submission Instruction No. 4: Design Plans and Report for Other Solid Waste Management Facilities* for detailed instructions regarding the Design Plans to be submitted in this Attachment.

[§9 VAC 20-81-470.A.1.]

#### F. PTB Attachment IV: Closure Plan

See *Submission Instruction No. 6: Closure and Post-Closure Care Plans for Solid Waste Disposal and Management Facilities* for detailed instructions regarding the Closure Plan to be submitted in this Attachment. [§9 VAC 20-81-470.A.2.]

#### G. PTB Attachment V: Post-Closure Care Plan

*{Applicable only to solid waste disposal facilities}* See *Submission Instruction No. 6: Closure and Post-Closure Care Plans for Solid Waste Disposal and Management Facilities* for detailed instructions regarding the Post-Closure Care Plan to be submitted in this Attachment. [§9 VAC 20-81-470.A.3.]

#### H. PTB Attachment VI: Design Report

See *Submission Instruction No. 2, 3, or 4* as noted in [Section V.E.](#) above for detailed instructions regarding the Design Report to be submitted in this Attachment. [§9 VAC 20-81-470.B. and 480.B.]

#### I. PTB Attachment VII: Construction Quality Assurance (CQA) Plan & Technical Specifications

See *Submission Instruction No. 2, 3, or 4* as noted in [Section V.E.](#) above for detailed instructions regarding the CQA Plan and Technical Specifications to be submitted in this Attachment. [§9 VAC 20-81-130.Q.2., 470.B. and 480.B.]

#### J. PTB Attachment VIII: Leachate Management Plan

See *Submission Instruction No. 7: Leachate Management Plan for Solid Waste Management Facilities* for detailed instructions regarding the Leachate Management Plan to be submitted in this Attachment. [§9 VAC 20-81-210]



If the “Treated onsite and discharged” box is checked on DEQ Form SW PTB, provide a copy of the VPDES permit issued in this Attachment.

**K. PTB Attachment IX: Landfill Gas Management Plan and Landfill Gas Remediation Plan**

See *Submission Instruction No. 13: Landfill Gas Management, Remediation, and Odor Plans for Solid Waste Disposal Facilities* for detailed instructions regarding the Landfill Gas Management/Remediation Plans to be submitted in this Attachment. [§9 VAC 20-81-200]

**L. PTB Attachment X: Groundwater Monitoring Plan**

See *Submission Instruction No. 5: Groundwater Monitoring and Sampling & Analysis Plans for New Solid Waste Disposal Facilities*; *Submission Instruction No. 11: Groundwater Monitoring and Sampling & Analysis Plans for Existing Regulated CDD & Industrial Landfills*; or *Submission Instruction No. 12: Groundwater Monitoring and Sampling & Analysis Plans for Existing Regulated Sanitary Landfills* for detailed instructions regarding the Groundwater Monitoring Plan to be submitted in this Attachment. [§9 VAC 20-81-250]

**M. PTB Attachment XI: Groundwater Corrective Action Plan**

See *Submission Instruction No. 17: Design of a Corrective Action Plan (CAP) Concerning Groundwater Contamination at Regulated Sanitary, CDD, and Industrial Landfills* for detailed instructions regarding the Groundwater Corrective Action Plan to be submitted in this Attachment. [§9 VAC 20-81-260]

**N. PTB Attachment XII: Financial Assurance Demonstration**

All facilities except for those owned and operated by State or Federal Agencies shall demonstrate financial assurance for closure, post-closure, and corrective action costs in accordance with the Financial Assurance Regulations for Solid Waste Disposal, Transfer, and Treatment Facilities ([9 VAC 20-70](#)). Once the closure plans are approved, a draft permit has been prepared, and prior to acceptance of waste or CTO for a new cell, the applicant must submit a financial assurance mechanism in the amount of the approved cost estimates. See *Submission Instruction No. 9: Requirements for Financial Assurance Mechanisms* for detailed instructions regarding the Financial Assurance Documentation to be submitted in this Attachment. This attachment is only applicable to new permits or permit modifications resulting in an increase in the closure, post-closure, or corrective action financial assurance amounts. [§9 VAC 20-81-470.C. and 480.C.]

**O. PTB Attachment XIII: Special Waste Documentation**

If the “Contaminated Soil” or “Other Special Wastes” box is checked on DEQ Form SW PTB, the applicant should provide documentation for each special waste proposed for acceptance at the solid waste disposal or management facility. These forms should be accompanied by a Special Waste Plan that identifies, at a minimum, the quantity of

material to be accepted, the sampling analysis and frequency to be or already completed, and generator knowledge. Procedures for handling and disposing of each special waste identified should also be provided. [§9 VAC 20-81-140.B.4. and 610 through 660]

**P. PTB Attachment XIV: Alternate Liner Demonstration**

1. *{Applicable to Sanitary Landfills}* If the “Additional Alternate” sanitary landfill liner design is checked on DEQ Form SW PTB, the applicant shall provide a demonstration indicating that the proposed alternate liner design meets the regulatory requirements of [§9 VAC 20-81-130.J.1.c.](#) See Section V.A. of *Submission Instruction No. 2: Design Plans and Report for Solid Waste Disposal Facilities* for detailed instructions regarding the information to be submitted as part of this demonstration.
2. *{Applicable to CDD and Industrial Landfills}* If the “Alternate Liner” CDD or industrial landfill liner design is checked on DEQ Form SW PTB, the applicant shall provide a demonstration indicating that the proposed alternate liner design meets the regulatory requirements of [§9 VAC 20-81-130.J.2.c.](#) See Section V.B. of *Submission Instruction No. 2: Design Plans and Report for Solid Waste Disposal Facilities* for detailed instructions regarding the information to be submitted as part of this demonstration.

**Q. PTB Attachment XV: Laboratory Test Results Documenting Permeability of In-place Soils**

*{Applicable only to CDD and Industrial Landfills}* If the “In-Place Soil” liner design is checked on DEQ Form SW PTB, the applicant shall provide laboratory test results documenting the permeability of in-place soils. The in-place soil liner proposed shall be of equivalent thickness and have a hydraulic conductivity equal to or less than the clay liner specified under [§9 VAC 20-130.J.2.a.](#) (i.e. the liner will be a minimum of one foot thick and the hydraulic conductivity shall be equal to or less than  $1 \times 10^{-7}$  cm/sec). [§9 VAC 20-81-130.J.2.d.]

**R. PTB Attachment XVI: Alternate Final Cover Demonstration**

If the “Additional Alternate” final cover design is checked on DEQ Form SW PTB, the applicant shall provide a demonstration indicating that the proposed alternate final cover design meets the regulatory requirements of [§9 VAC 20-81-160.D.2.f.](#) The demonstration shall show that:

1. The proposed infiltration layer achieves an equivalent reduction in infiltration as would be achieved using 18 inches of earthen material with a hydraulic conductivity less than or equal to the hydraulic conductivity of the bottom liner system or natural subsoils present or no greater than  $1 \times 10^{-5}$  cm/sec, whichever is less; and

2. The 24-inch erosion layer is capable of sustaining native plant growth, and will provide protection of the infiltration layer from the effects of erosion, frost, and wind.

Additional information regarding the demonstration can be found in the Office of Waste Permitting and Compliance Memo 2009-04: Final Cap System Hydraulic Conductivity Testing—Infiltration Layer

S. PTB Attachment XVII: Research, Development, and Demonstration Plan

*{Research, Development, and Demonstration (RDD) Plans are optional and only applicable to sanitary landfills designed with a composite liner, as required by §9 VAC 20-81-130.J.1., and leachate collection system}* See [Waste Guidance Memo 05-2009: Research, Development, and Demonstration Plans](#) for instructions regarding the plan to be submitted in this attachment.

## VI. PERMIT MODIFICATIONS

---

Procedures for modifying solid waste permits are provided under [9 VAC 20-81-600](#). The following provides additional information regarding the items that should be submitted for each type of permit modification.

### A. Major Modifications

Major permit modifications are deemed to substantially alter the facility or its operation and are specified in Table 5.2 of [9 VAC 20-81-600](#).F. The major permit modification application should be submitted to the DEQ Regional Office responsible for the location of the facility. Major permit modification applications should contain the following items, as applicable.

#### 1. Notice of Intent

The facility shall submit a letter (1) stating the precise location and intended use of the facility; (2) describing the exact change to be made to the permit conditions and supporting documents referenced by the permit; (3) identifying the proposed change(s) as a major modification; (4) explaining why the modification is needed; and (5) attaching area and site location maps.

The Notice of Intent shall be accompanied by all items discussed in [Section III](#) (Items B through H) if applicable. Keep in mind that facilities applying for an expansion of the WMB (or the DUB for facilities without a Part A permit) is defined as a “new solid waste management facility” if the expansion area was not previously addressed in the Part A application. [9 VAC 20-81-450.B. and 600.F.3.b.]

In regards to the SCC Certification, [Section III.H.](#), the applicant shall provide either an updated Certificate of Good Standing (for corporations) or a Certificate of Fact (for LLCs) from the State Corporation Commission (SCC) for the designated owner and/or operator if one has not been previously submitted to the Department (either to the Office of Financial Assurance or the Regional Office) within the last year (365 days). [9 VAC 20-81-450.B.10.]

#### 2. Part A Modification

Consult [Waste Guidance Memo 01-2009: Scenarios Under Which a Part A Amendment Is or Is Not Required](#) to determine whether a Part A Modification is required. If a Part A Modification is required, the facility shall submit the following:

##### a. *Application Form*

Provide a new signed and certified DEQ Form SW PTA as discussed in [Section IV.A.](#) [9 VAC 20-81-460.A.]

b. *Permit Modification Fee*

Submit a check, draft, or postal money order made payable to the Treasurer of Virginia for the required permit modification fee in accordance with the Solid Waste Management Facility Permit Action Fees and Annual Fees regulation ([9 VAC 20-90](#)) to DEQ Accounts Receivable, P.O. Box 1104, Richmond, Virginia 23218. A copy of the check (with account and routing numbers blacked out), draft, or postal money order should accompany the permit application submitted to the DEQ Regional Office. Applications not accompanied by the proper fee or containing insufficient fees will be considered incomplete and shall not be processed by the Department. [9 VAC 20-90-90]

c. *PTA Attachments I through XXIV*

Provide revised attachments as indicated in [Waste Guidance Memo 01-2009](#). See [Section IV](#) above for detailed instructions on the information to include in each attachment. [9 VAC 20-81-460.A.]

3. **Part B Modification**

a. *Application Form*

Provide a new signed DEQ Form SW PTB as discussed in [Section V.A.](#) [9 VAC 20-81-470.D.]

b. *Permit Modification Fee*

Submit a check, draft, or postal money order made payable to the Treasurer of Virginia for the required permit modification fee in accordance with the Solid Waste Management Facility Permit Action Fees and Annual Fees regulation ([9 VAC 20-90](#)) to DEQ Accounts Receivable, P.O. Box 1104, Richmond, Virginia 23218. A copy of the check (with account and routing numbers blacked out), draft, or postal money order should accompany the permit application submitted to the DEQ Regional Office. Applications not accompanied by the proper fee or containing insufficient fees will be considered incomplete and shall not be processed by the Department. [9 VAC 20-90-90]

c. *PTB Attachments I through XVII*

Provide revised attachments as applicable for the permit documents that will require modification as a result of the requested modification and those items indicated in [Waste Guidance Memo 01-2009](#) if a Part A modification isn't required. See [Section V](#) above for detailed instructions on the information to include in each attachment. [9 VAC 20-81-470 and 480]

B. **Minor Modifications**

Minor permit modifications consist of minor changes that keep the permit current, but do not substantially alter the permit conditions or reduce the capacity of the facility to protect human health and the environment. For any permit modification not specified as a major modification or permittee change in Table 5.2 of [9 VAC 20-81-600.F.](#), the

applicant shall apply for a minor modification. The following items should be submitted as one package to the appropriate DEQ Regional Office by certified mail or other means to establish proof of delivery.

**1. Notice of Intent**

The facility shall submit a letter (1) stating the precise location and intended use of the facility; (2) describing the exact change to be made to the permit conditions and supporting documents referenced by the permit; (3) identifying the proposed change(s) as a minor modification; (4) explaining why the modification is needed; and (4) attaching area and site location maps.

If the minor modification would result in a facility that is more protective of human health and the environment, the Notice shall include an explanation of the manner in which the health and environment will be protected in a greater degree than required by the VSWMR. [9 VAC 20-81-450.B. and 600.F.2.c.]

The Notice of Intent shall be accompanied by all items discussed in [Section III](#) (Items B through H) if applicable. In regards to the SCC Certification, [Section III.H.](#), the applicant shall provide either an updated Certificate of Good Standing (for corporations) or a Certificate of Fact (for LLCs) from the State Corporation Commission (SCC) for the designated owner and/or operator if one has not been previously submitted to the Department (either to the Office of Financial Assurance or the Regional Office) within the last year (365 days). [9 VAC 20-81-450.B.10.]

**2. Part A Modification**

Consult [Waste Guidance Memo 01-2009: Scenarios Under Which a Part A Amendment Is or Is Not Required](#) to determine whether a Part A Modification is required. If a Part A Modification is required, the facility shall submit the following:

a. *Application Form*

Provide a new signed DEQ Form SW PTA as discussed in [Section IV.A.](#) [9 VAC 20-81-470.D.]

b. *PTA Attachments I through XXIV*

Provide revised attachments as indicated in [Waste Guidance Memo 01-2009](#). See [Section IV](#) above for detailed instructions on the information to include in each attachment. [9 VAC 20-81-460.A.]

If the Part A Modification is not necessary, provide the additional documentation required as indicated in [Guidance Memo 01-2009](#) with the Notice of Intent for the Part B Modification. [9 VAC 20-81-460 and 600.F.2.c.]

### 3. **Part B Modification**

#### a. Application Form

Provide a new signed DEQ Form SW PTB as discussed in [Section V.A.](#) [9 VAC 20-81-470.D.]

#### b. PTB Attachments I through XVII

Provide revised attachments as applicable for the permit documents that will require an update as a result of the requested modification. See [Section V](#) above for detailed instructions on the information to include in each attachment. [9 VAC 20-81-470 and 480]

### C. **Permittee Change**

Modifications specified as Permittee Change in Table 5.2 of [9 VAC 20-81-600.F.](#) may be implemented without prior Department approval. The following notifications shall be submitted to put the desired permittee change into effect:

#### 1. **Notice of Intent**

A minimum of 14 calendar days prior to implementing the desired permittee change, the facility shall submit a Notice of Intent to the appropriate DEQ Regional Office. The Notice of Intent shall be in letter form (1) stating the precise location and intended use of the facility; (2) describing the exact change to be made to the permit conditions and supporting documents referenced by the permit; (3) identifying the proposed change(s) as a permittee change; (4) explaining why the modification is needed; and (4) attaching area and site location maps. [9 VAC 20-81-450.B. and 600.F.1.a.]

#### 2. **Notice to Local Governing Body**

Within 90 days of implementing the permittee change, the permittee shall send a notice of the modification to the local governing body of the county, city, or town in which the facility is located. A copy of the notification should be provided to the DEQ Regional Office to ensure compliance with [§9 VAC 20-81-600.F.1.b.](#)

### D. **Temporary Authorization**

#### 1. **Applicability**

A Temporary Authorization may be requested for any major modification, where the temporary authorization would provide improved management or treatment of a solid waste already listed in the facility permit and is necessary:

- a. To facilitate timely implementation of closure or corrective action activities [§9 VAC 20-81-600.F.4.c.(2)(a)];
- b. To prevent disruption of ongoing waste management activities [§ 9 VAC 20-81-600.F.4.c.(2)(b); or
- c. To enable the permittee to respond to sudden changes in the types or quantities of wastes managed under the facility permit **and** facilitate other

changes to protect human health and the environment [§9 VAC 20-81-600.F.4.c.(2)(c) and (d)]

**2. Submission Requirements**

The temporary authorization request shall be submitted to the DEQ Regional Office in letter form and include:

- a. A description of the activities to be completed under the temporary authorization;
- b. An explanation of why the temporary authorization is necessary; and
- c. Sufficient information to ensure compliance with Part III ([§9 VAC 20-81-100 et seq.](#)) or Part IV ([§9 VAC 20-81-300 et seq.](#)).

[9 VAC 20-81-600.F.4.b.(2)]

**3. Notification Requirement**

Within seven days of submitting the temporary authorization request, the permittee shall send a notice about the request to all persons on the facility mailing list. A copy of the notification should be provided to the DEQ Regional Office to ensure compliance with § 9 VAC 20-81-600.F.4.b.(3).

**E. Research, Development, and Demonstration Plans**

Incorporation of a Research, Development, and Demonstration (RDD) Plan into a solid waste permit is classified as a major permit modification. Details regarding the applicability and contents of the RDD Plan, and processing procedures are discussed in [Guidance Memo 05-2009: Research, Development, and Demonstration Plans](#). [9 VAC 20-81-600.F.7.]



## VII. APPENDICES

---

### A. Pre-Application Correspondence

1. Public-Notice
2. Reservation of Disposal Capacity

### B. Notice of Intent Correspondence

1. Disposal Capacity Guarantee – Locality-Owned/Locality-Operated Sanitary Landfill
2. Disposal Capacity Guarantee – Privately-Owned Sanitary Landfill

### C. Part A Permit Application Correspondence

1. Part A Maps
  - a. Key Map Example
  - b. Near-Vicinity Map Example
  - c. Regional Map Example
2. Hydrogeologic and Geotechnical Report Information
  - a. Suggested Laboratory Methods
  - b. Geologic Map Example
  - c. Orthogonal Cross-Section Example
  - d. Potentiometric Surface Map Example
3. VDOT Approval – Sanitary Landfill
4. VDOT Approval – CDD or Industrial Landfill or Other Solid Waste Management Facility
5. Adjacent Property Owner Certification Statement
6. Adjacent Property Owner Notification Letter

---

## Appendix A.1. Example Public Notice

---

### PUBLIC NOTICE

As required by §9 VAC 20-81-450.B.4. and §10.1-1408.1.B.4., the {Facility Name} announces a public meeting to show its intent to apply for a permit to operate a {sanitary landfill or transfer station}, and to receive comments and questions on the proposed siting and operation of the facility. The proposed site is located in {indicate local government district}, {provide location description with reference to nearby landmarks, major interstates or routes, etc.}. The latitude and longitude of the site is {provide lat/long coordinates}. The proposed facility consists of portions or all of the following tax parcels: {indicate tax map parcels}. A public meeting will be held on {date, time} at the {public hearing location and address (provide location description if necessary)}. More detailed information regarding the location of the public hearing facility may be obtained from {provide contact name and phone number and/or email address}. Interested persons may contact {owner contact, company name, phone number and/or email address} with questions or comments regarding the proposed application. Written correspondence may be send {owner contact, address}. Interested parties may also access available information {state location where copies of planning documents are available, whether on the internet, local government office, public library, and/or company business office}.

## Appendix A.2. Reservation of Disposal Capacity

---

### NOTIFICATION LETTER:

*Date*

*Contact Name*

*Locality Administrator*

*Address*

*Town, VA ZIP*

Dear *Contact name*:

*Applicant* plans to construct and operate a municipal solid waste management facility in *County/ City/ Town / Place*. Pursuant to Virginia Code 1408.1 B.6, you may reserve disposal capacity in this landfill up to the requirements specified in your approved solid waste management plan. By signing the agreement below, *the applicant* agrees to guarantee the facility will reserve the requested disposal capacity for *the locality*. The applicant and locality must sign a contract that stipulates the conditions of the agreement. By signing the denial statement, *the locality* agrees that it does not wish to reserve disposal capacity. If the acceptance agreement is not returned within 60 days from the date of this letter, it will be assumed that *the locality* has refused the offer to reserve disposal capacity.

Sincerely,

*Contact Name*

*Applicant*

*Address*

*Town, VA ZIP*

## AGREEMENT TO ACCEPT:

On behalf of \_\_\_\_\_, the undersigned hereby accepts the offer from \_\_\_\_\_ to reserve disposal capacity in the planned facility. The locality has fully investigated its future solid waste disposal needs and has concluded it requires \_\_\_\_\_ cubic yards of reserve capacity. The undersigned understands that by accepting this offer, *the locality* and the *applicant* must enter into a contract that stipulates the conditions of the agreement. The acceptance letter will constitute an enforceable agreement to guarantee future disposal capacity until a formal contract is signed.

Signed: \_\_\_\_\_ Date \_\_\_\_\_

Title and investing Authority \_\_\_\_\_

Contact Information \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

## STATEMENT OF DENIAL:

On behalf of \_\_\_\_\_, the undersigned declines the offer to reserve disposal capacity in the planned facility. The undersigned agrees that by signing this statement, the applicant has made a good faith effort to inform the locality of its right to reserve airspace and that the locality has fully investigated its solid waste disposal needs and believes the reserve airspace is not needed at this time.

Signed: \_\_\_\_\_ Date \_\_\_\_\_

Title and investing Authority \_\_\_\_\_

Contact Information \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**Appendix B.1. Disposal Capacity Guarantee – Locally Owned/Operated Sanitary Landfill**

Pursuant to §9 VAC 20-81-450.B.5. of the Solid Waste Management Regulations (VSWMR, 9 VAC 20-81-10 *et seq.*) and §10.1-1408.1.B.6. of the Code of Virginia, this document constitutes a statement by the applicant, {Owner Name}, that the {Facility Name} will accept only solid waste generated within the regional authority's member jurisdictions that include {Name of the member counties, cities, and towns}.

Signed: \_\_\_\_\_ Date \_\_\_\_\_

Title and investing Authority \_\_\_\_\_

Contact Information \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

---

**Appendix B.2. Disposal Capacity Guarantee – Privately Owned Sanitary Landfill**

---

Pursuant to §9 VAC 20-81-450.B.5. of the Solid Waste Management Regulations (VSWMR, 9 VAC 20-81-10 *et seq.*) and §10.1-1408.1 B.6. of the Code of Virginia, this document constitutes a statement by the applicant, {Owner Name} has contacted all localities in Virginia to offer reserve disposal capacity per the respective solid waste management plans.

*{If no localities have entered into a contract at the time of this submittal}* No localities have entered into a contract with {Owner Name} as a result of the offer. However, the localities will be allowed to enter into a contract in the future if they want to do so.

*{If localities have or will be entered into a contract}* Only those localities listed below have agreed to the offer. The total reserve disposal capacity for all of the localities on the list below is \_\_\_\_\_ cubic yards. By agreeing to this offer, the applicant guarantees to reserve the required capacity in the facility by entering into a contractual agreement with these localities.

*{List localities and reserve capacity in cubic yards}*

Signed: \_\_\_\_\_ Date \_\_\_\_\_

Title and investing Authority \_\_\_\_\_

Contact Information \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### Appendix C.1. Suggested Laboratory Methods

SAMPLE ORIGIN	PARAMETER	METHOD	DETERMINES
Geologic formation, unconsolidated sediments, consolidated sediments, solum	Hydraulic Conductivity	Falling head, static head tests	Hydraulic conductivity
	Size Fraction	Sieving (ASTM)	Hydraulic conductivity
		Settling Measurements (ASTM)	Hydraulic conductivity
	Sorting	Petrographic Analysis	Porosity
		Column Drawings	
	Specific yield	Centrifuge Tests	Porosity
	Specific retention	Petrographic analysis	Soil type, rock type
	Petrology /pedology	X-ray diffraction	
	Mineralogy	confining clay mineralogy/chemistry	Geochemistry, potential flow paths
		Petrographic analysis	
	Bedding	Petrographic analysis	
		ASTM	
	Laminations		
	Atterberg limits		Soil cohesiveness
Contaminated samples (e.g., soils producing higher than background organic readings)	Appropriate subset of Appendix 5-1 parameters	SW-846	Identity of contaminants

---

**Appendix C.2. VDOT Approval – Sanitary Landfill**

---

VDOT (or County or City, as appropriate) LETTERHEAD

{Date}

{Applicant  
Address}RE: VDOT Traffic Adequacy Report  
{Facility Name}

Dear {Applicant}:

In accordance with the Code of Virginia, §10.1-1408.1 D.1. and §10.1-1408.4 A.1., the VDOT Traffic Adequacy Report dated {date} that was received by this office on {date} has been reviewed. The report accounted for the existing traffic volumes, including the individual/private vehicle drop-offs as well as the traffic volumes that correlate with the proposed daily disposal limit of {daily disposal limit in tons per day} tons per day for the peak hours.

Based on the review it is determined that no improvements are necessary on {Route No. and/or Road Name} or the following improvements are necessary in order to safely handle the projected traffic flow.

{List the improvements required on the Route No. such as right turn lane with taper, left turn lane with taper, stop sign, traffic signals, etc.}

{Closing remarks and contact information of the signatory or designee, in case DEQ has any questions and wants to contact}.

*Signature*Name of the Signatory  
Designation



### Appendix C.3. VDOT Approval – CDD or Industrial Landfill or Other Solid Waste Management Facility

---

VDOT (or County or City, as appropriate) LETTERHEAD

{Date}

{Applicant  
Address}

RE: Traffic Impact Evaluation  
{Facility Name}

Dear {Applicant}:

In accordance with the Code of Virginia, §10.1-1408.1 D.1., the Traffic Impact as presented in your letter dated {date} {along with other attachments, if any} that was received by this office on {date} has been reviewed. The letter {and the attachments, if any} accounted for the existing traffic volumes, including the individual/private vehicle drop-offs as well as the traffic volumes that correlate with the proposed daily disposal limit of {daily disposal limit in tons per day} tons per day for the peak hours.

Based on the review it is determined that no improvements are necessary on {Route No. and/or Road Name} or the following improvements are necessary in order to safely handle the projected traffic flow.

{List the improvements required on the Route No. such as right turn lane with taper, left turn lane with taper, stop sign, traffic signals, etc.}

{Closing remarks and contact information of the signatory or designee, in case DEQ has any questions and wants to contact}.

*Signature*

Name of the Signatory

Designation

---

**Appendix C.4. Adjacent Property Owner Certification Statement**

---

Pursuant to §9 VAC 20-81-460.I. of the Virginia Solid Waste Management Regulations (VSWMR, 9 VAC 20-81-10 *et seq.*) this document constitutes a statement by the applicant, {Owner Name}, that written notice has been sent to all owners or occupants of the property adjacent to the {proposed new facility or proposed expansion of the existing facility}. A list of names and addresses of the adjacent property owners or occupants along with a sample copy of the notification letter has been included with this statement.

Signed: \_\_\_\_\_ Date \_\_\_\_\_

Title and investing Authority \_\_\_\_\_

Contact Information \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

---

### Appendix C.5. Adjacent Property Owner Notification Letter

---

Adjacent Property Owner/Occupant  
Address

Subject:       Siting a new landfill/expansion of an existing landfill  
                  {Facility Name}, {Permit Number}

In accordance with §9 VAC 20-81-460.I. of the Virginia Solid Waste Management Regulations (VSWMR, 9 VAC 20-81-10 *et seq.*) this letter is to inform you that {Owner Name}, will be submitting a Part A Application to the Virginia Department of Environmental Quality to {site a new landfill/expansion of an existing landfill} located at {physical address of the facility or the intersection}. You have been notified as, according to the county/city/town record, your property is adjacent to the proposed landfill property.

If you have any questions or concerns, please contact me at {phone number and/or email address}.

*Signature*

Name of the Signatory  
Designation